10/724,194

WEST Search History



DATE: Sunday, July 29, 2007

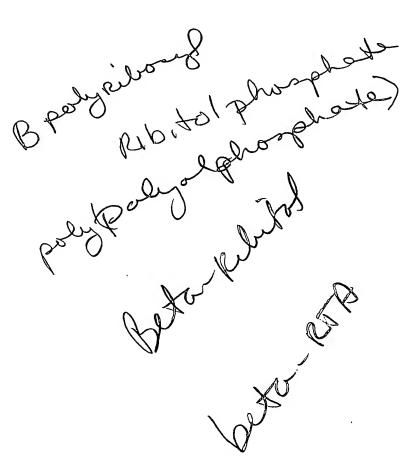
Hide?	<u>Set</u> Name	Query	<u>Hit</u> Count
	DB=Pc	GPB, USPT, USOC, EPAB, JPAB, DWPI; PLUR=YES; OP=OR	
	L12	L10_not 19 not 12	4
	L11	L10 not 19 ot 12	563698
	L10	L1.clm. and (hybridoma or hybri-doma or mab or moab or monoclonal or mono-clonal or ascites).clm.	6
	L9	L1.clm. same (hybridoma or hybri-doma or mab or moab or monoclonal or mono-clonal or ascites).clm.	2
	L8	L6 not 12	103
	L7	L6 not 12	103
	L6	L5 and (combination or combined or mixture or plurality or multiple)	103
	L5	L4 and staph\$	103
	L4	L1.ti.ab.clm. same (hybridoma or hybri-doma or mab or moab or monoclonal or mono-clonal or ascites).ti,ab,clm.	668
	L3	L1.ti.ab.clm. and (hybridoma or hybri-doma or mab or moab or monoclonal or mono-clonal or ascites).ti,ab,clm.	2155
	L2	L1 near5 (hybridoma or hybri-doma or mab or moab or monoclonal or mono-clonal or ascites)	3
	L1	\$ribitol\$	2304

END OF SEARCH HISTORY

Most Recent Queries	Time	Result	
-	Search beta ribitol teichoic acid	10:33:33	<u>13</u>
<u>#45</u>	Search beta ribitolteichoicacid	10:33:28	<u>593838</u>
#43	Search beta rta	10:31:39	<u>78</u>
#44	Search beta-rta	10:31:25	1
#42	Search beta rta monoclonal	10:31:06	<u>6</u>
<u>#41</u>	Search betarta monoclonal	10:30:39	<u>199609</u>
<u>#38</u>	Search staphylococcus antibodies lipoteichoic ribitol	10:28:07	2
<u>#37</u>	Search staphylococcus monoclonal antibodies lipoteichoic ribitol	10:27:55	<u>0</u>
<u>#34</u>	Search staphylococcus aureus monoclonal antibodies teichoic acid	10:24:00	9
<u>#33</u>	Search staphylococcus aureus monoclonal antibodies	10:23:50	<u>795</u>
#32	Search aureus monoclonal antibodies	10:23:38	<u>829</u>
<u>#31</u>	Search aureus monoclonal	10:22:30	<u>1043</u>
<u>#29</u>	Related Articles for PubMed (Select 3918002)	10:19:38	<u>315</u>
<u>#25</u>	Search staphylococcus polyribosylribitolphosphate	10:15:16	<u>3</u>
<u>#24</u>	Search hybridoma staphylococcus polyribosylribitolphosphate	10:15:10	<u>0</u>
<u>#23</u>	Search hybridoma staphylococcus ribitolphosphate	10:14:55	0
<u>#22</u>	Search hybridoma staphylococcus ribitol	10:14:46	<u>0</u>
<u>#21</u>	Search monoclonal staphylococcus ribitol	10:14:33	<u>0</u>
<u>#16</u>	Search monoclonal ribitol phosphate	10:12:16	4
<u>#15</u>	Search monoclonal ribitolphosphate	10:12:12	<u>0</u>
	Search hybridoma ribitolphosphate	10:12:04	<u>0</u>
<u>#13</u>	Search hybridoma ribitol	10:11:55	<u>0</u>

#10 Search antibodies ribitol	10:08:49	<u>94</u>
#8 Search anti-ribitol	10:07:38	<u>2</u>
#5 Related Articles for PubMed (Select 1818853)	10:07:28	<u>157</u>
#4 Search antiribitol	10:05:11	<u>1</u>
#1 Search ribitol monoclonal antibodies		

- 1. [1] Burnet, F. M., Cellular Immunology, (Cambridge University press, 1969).
- 2. [2] Dilman, V. M., The Law of Deviation of Homeostasis and Diseases of Aging, (Boston, J. Wright PSV Inc., 1981), 380 pp.
- 3. [3] Heyflick, L., *The Limited In-vitro Lifetime of Human Diploid Cell Strain*, (Exp. Cell. Res., 1965, 37, 3) pp. 614-636.
- 4. [4] Max, E. E., *Immunoglobulin Molecular Genetics in Fundamental Immunology*, (W. E. Paul, New York, Raven Press, 1984).
- 5. [5] Needham, J. A., History of Embryology, 1934.
- 6. [6] Plisko, A., and Gilchrest, B., Growth Factor Responsiveness of Co-cultured Human Fibroblasts Declines With Age, (J. Gerontol, 1983, 38, 3), pp. 513-518.
- 7. [7] Silverstain, A. M., *The History of Immunology*, (Ed. W. E. Paul, New York, Raven Press, 1984).



in the second of the second of

1: Indian J Pathol Microbiol. 1991 Jul;34(3):176-80. Links

Antiribitol-teichoic acid antibody (ARTA) in diagnosis of deep seated Staphylococcus aureus infections.

Ayyagari A, Pal N.

Department of Medical Microbiology, Postgraduate Institute of Medical Education & Research, Chandigarh.

Antiribitol-teichoic acid antibody (ARTA) was detected in sera of 30 out of 50 patients (60%) with various acute deep seated Staphylococcus aureus infections and 5 out of 10 chronic osteomyelitis cases, whereas none of the sera from 50 patients with superficial Staphylococcus aureus infections as well from 50 patients without Staphylococcus aureus infections showed antibody response (p less than 0.01). This test is a definite advantage in diagnosis of deep seated staphylococcal infections like endocarditis, lung disease, meningitis and specially in osteomyelitis cases where organisms cannot be isolated and therefore helps in predicting the need for long term antimicrobial therapy.

PMID: 1818853 [PubMed - indexed for MEDLINE

and the contract of the contra

主治病抗疗 计类数逻辑 在一个一个小智慧、多位强性性的感染性性的 禁心 不知的 经自己的工作人会 and the second of the second o PROPERTY OF SERVICE AND CONTRACT OF SERVICE SERVICES OF THE SE

J Neuroimmunol. 1989 Apr;22(2):135-42. Links

Extended repertoire of specific antibodies in CSF of patients with subacute sclerosing panencephalitis compared to those with multiple sclerosis: anti-bacterial antibodies are also increased.

Persson MA, Laurenzi MA, Vranjesevic D.

Department of Clinical Immunology, Karolinska Institute, Huddinge Hospital, Sweden.

Serum and cerebrospinal fluid (CSF) from eight patients with subacute sclerosing panencephalitis (SSPE), 21 with multiple sclerosis (MS) and 16 controls were analyzed for IgG subclass pattern of anti-viral and anti-bacterial antibodies. In CSF of SSPE and MS patients IgG1 and IgG4 antibodies to measles and IgG1 to mumps were increased compared to the controls. In addition, the SSPE patients had elevated levels of IgG1 to PPD, teichoic acid, and to dextran in CSF. The group of MS patients had decreased levels of IgG1 antibodies to Staphylococcus aureus alphatoxin.

en de la composition La composition de la La composition de la

and the residence of th

PMID: 2925841 [PubMed - indexed for MEDLINE]

THE COURSE OF A STREET

The state of the s

the lighter and the experience of the best of the transfer distriction in the contract of the

: Infect Immun. 1991 Dec; 59(12):4371-6: Erratum in:

í







Infect Immun 1993 Feb; 61(2):792.

Distinct pattern of antibody reactivity with oligomeric or polymeric forms of the capsular polysaccharide of Haemophilus influenzae type b.

Pillai S, Ciciriello S, Koster M, Eby R.

Praxis Biologics, Inc., Rochester, New York 14623.

The chain length of oligosaccharides required for antibody binding has been studied by using the capsular polysaccharide from Haemophilus influenzae type b or oligosaccharides derived from it. The concentration of competing antigens required to achieve a 50% inhibition of antibody binding by human polyclonal antisera in an in vitro competition enzyme-linked immunosorbent assay decreased progressively from greater than 10(-3) to 5 x 10(-7) M as the inhibiting saccharide chain length increased from 1 to 262 repeat units. Even small oligosaccharides (one or two repeat units) are potentially capable of competing to a significant level if a high enough concentration of saccharides is used. A similar pattern of reactivity was seen with a monoclonal anti-polyribosyl ribitol phosphate antibody, suggesting that the differences in the avidity of the antibody subpopulations in the polyclonal antisera do not contribute to the binding patterns observed. The binding reaction was specific as evaluated with pneumococcal saccharides. Furthermore, an oligosaccharide-protein conjugate binds antibody better than the free oligosaccharides do. Such a difference in binding was not observed between the polysaccharide and a polysaccharide-protein conjugate. Overall, the data suggest that identical epitopes are expressed by oligomeric and polymeric forms of the antigen and that a particularly more stable conformation in polysaccharides is preferred by antibodies. Covalent coupling of oligomers to protein increases the expression of stable conformation of epitopes. The data further suggest that this kind of antigenic analysis may be important for the design and synthesis of glycoconjugate vaccines.

PMID: 1718875 [PubMed - indexed for MEDLINE]

Related Links

- Effect of oligosaccharide chain length, exposed terminal group, and hapten loading on the antibody response of human adults and infants to vaccines consisting of Haemophilus influenzae type b capsular antigen unterminally coupled to the diphtheria protein CRM197. [J Immunol. 1989]
- The intrinsic affinity constant (K) of anticapsular antibody to oligosaccharides of Haemophilus influenzae type b. [J Immunol. 1988]
- Synthetic trimer and tetramer of 3-beta-D-ribose-(1-1)-D-ribitol-5-phosphate conjugated to protein induce antibody responses to Haemophilus influenzae type b capsular polysaccharide in mice and monkeys. [Infect Immun. 1992]
- Response of 7- to 15-month-old infants to sequential immunization with Haemophilus influenzae type b-CRM197 conjugate and polysaccharide vaccines. [Am J Dis Child. 1991]
- Response to a Haemophilus influenzae type b diphtheria CRM197 conjugate vaccine in children with a defect of antibody production to Haemophilus influenzae type b

polysaccharide. [J Allergy Clin Immunol. 1990] See all Related Articles...

Display AbstractPlus Show 20

Preparation of a latex reagent for the detection of anti-Staphylococcus aureus ribitol teichoic acid antibodies.

de Montclos M, Flandrois JP.

Bacteriology Laboratory, Université Claude Bernard Lyon I, Faculté de Médecine Lyon-Sud, Pierre-Benite, France.

Purified S. aureus ribitol teichoic acid was covalently bound to carboxylated latex particles. The immunological properties of the polysaccharide antigen were preserved. The reagent obtained was used for the quantification of anti-ribitol teichoic acid antibodies by means of a direct and rapid agglutination test carried out on a slide. There was good correlation between the preliminary results of this test and those obtained with counter-immunoelectrophoresis (CIE). The method is faster and more sensitive than CIE.

PMID: 2261065 [PubMed - indexed for MEDLINE]

Record List Display Page 1 of 4

Hit List

First Hit Clear Generate Collection Find Find Refs Bkwd Refs Generate OACS

Search Results - Record(s) 1 through 4 of 4 returned.

☐ 1. Document ID: US 20060228368 A1

L12: Entry 1 of 4

File: PGPB

Oct 12, 2006

DOCUMENT-IDENTIFIER: US 20060228368 A1 TITLE: Method of protecting against staphylococcal infection

CLAIMS:

- 1. A method for preventing infection in a population of patients at risk for infection by various species of Staphylococcus or various types of Staphylococcus aureus, comprising administering to a patient in the population a composition comprising a conjugate of an isolated S. aureus antigen that contains N-acetylglucosamime linked to <u>ribitol</u>, wherein the antigen binds with antibodies to S. aureus Type 336 deposited under ATCC 55804, wherein the conjugate of the isolated S. aureus antigen produces antibodies that protect against a species or type of Staphylococcus other than S. aureus Type 336.
- 2. A method according to claim 1, wherein the antigen comprises a 1,5-poly(<u>ribitol</u> phosphate) polymer chain in which the 3-position of the <u>ribitol</u> is substituted by N-acetyl-.beta.-D-glucosaminyl residues.
- 3. A method for preventing infection in a population of patients at risk for infection by Staphylococcus epidermidis, comprising administering to a patient in said population a composition comprising a conjugate of an isolated S. aureus antigen that contains N-acetylglucosamime linked to ribitol, wherein the antigen binds with antibodies to S. aureus Type 336 deposited under ATCC 55804, wherein the isolated S. aureus antigen produces antibodies that protect against S. epidermidis.
- 4. A method according to claim 3, wherein the antigen comprises a 1,5-poly(<u>ribitol</u> phosphate) polymer chain in which the 3-position of the <u>ribitol</u> is substituted by N-acetyl-.beta.-D-glucosaminyl residues.
- 5. A method for treating infection in a population of patients at risk for developing infection by various species of Staphylococcus or various types of Staphylococcus aureus, comprising administering to a patient in said population a composition comprising antibodies to a conjugate of an isolated S. aureus antigen that contains N-acetylglucosamime linked to <u>ribitol</u>, and that binds with antibodies to S. aureus Type 336 deposited under ATCC 55804.
- 6. A method for treating infection in a patient diagnosed as having a S. epidermidis infection, comprising administering to the patient a composition comprising antibodies to a conjugate of an isolated S. aureus antigen that contains N-acetylglucosamime linked to ribitol, and that binds with antibodies to S. aureus Type 336 deposited under ATCC 55804.

Record List Display Page 1 of 4

Hit List

First Hit Clear Generate Collection Print Fwd Refs Bkwd Refs Generate OACS

Search Results - Record(s) 1 through 3 of 3 returned.

☐ 1. Document ID: US 4954449 A

L2: Entry 1 of 3

File: USPT

Sep 4, 1990

DOCUMENT-IDENTIFIER: US 4954449 A

TITLE: Human monoclonal antibody reactive with polyribosylribitol phosphate

Brief Summary Text (2):

This invention relates to a novel self-reproducing carrier cell and more specifically to a carrier cell containing genes for the production of human monoclonal antibody reactive with antigenic polyribosylribitol phosphate capsular polysaccharide, to the antibody, to a process of preparing the antibody from the carrier cell, to diagnostic, prophylactic and therapeutic methods and compositions employing this antibody, and to a research composition employing this antibody.

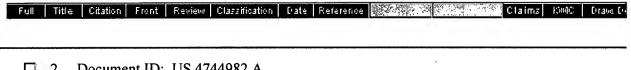
<u>Detailed Description Text</u> (7):

The splenic lymphocytes were thawed, hybridomas were prepared and purified anti-PRP was obtained using routine procedures. The splenic lymphocytes were fused with HFB-1 in the presence of a suitable fusion promoter, which in this case was 50% polyethylene glycol (MW, 1400), generally according to the now standard technique of Olsson and Kaplan described in Proc. Nat'l. Acad. Sci., USA, 77:5429 (1980), which is hereby incorporated by reference into this description. The early hybrids were grown in accordance with a customary procedure in microcultures in hypoxanthine-aminopterin-thymidine medium, which kills all HGPRT- parental myelomas. After 14 days of culture, the supernatants of the microcultures were screened by enzyme immunoassay for the presence of antibodies that bind to PRP capsular polysaccharide of the bacterium Haemophilus influenzae type b. A positive culture was cloned by limiting dilution on a feeder cell, which in this case was irradiated mouse tumor macrophages (P388D1). After 19 days, the microcultures were retested by enzyme immunoassay to identify clones that secreted monoclonal anti-PRP antibody. One clone designated C3, H12 by us was selected and grown in large-scale culture. By Ouchterlony analysis, the antibodies of this clone were determined to be of the IgG isotype, and by using Protein A Sepharose affinity chromatography, purified IgG anti-PRP antibody was obtained. The subclass of this antibody appears to be IgG1. As indicated earlier, now that we have described the procedures for obtaining this carrier cell, we believe that a person skilled in this art will be able to reproduce our work and obtain a self-reproducing carrier cell containing genes that produce human monoclonal antibody reactive with antigenic polyribosylribitol phosphate capsular polysaccharide.

CLAIMS:

1. A self-reproducing hybridoma containing genes that produce a human_monoclonal antibody reactive with antigenic polyribosybribitol phosphate capsular polysaccharide.

Page 2 of 4 Record List Display



☐ 2. Document ID: US 4744982 A

L2: Entry 2 of 3

File: USPT

May 17, 1988

DOCUMENT-IDENTIFIER: US 4744982 A

TITLE: Human monoclonal antibody reactive with polyribosylribitol phosphate

Brief Summary Text (2):

This invention relates to a novel self-reproducing carrier cell and more specifically to a carrier cell containing genes for the production of human monoclonal antibody reactive with antigenic polyribosylribitol phosphate capsular polysaccharide, to the antibody, to a process of preparing the antibody from the carrier cell, to diagnostic, prophylactic and therapeutic methods and compositions employing this antibody, and to a research composition employing this antibody.

Brief Summary Text (30):

The splenic lymphocytes were thawed, hybridomas were prepared and purified anti-PRP was obtained using routine procedures. The splenic lymphocytes were fused with HFB-1 in the presence of a suitable fusion promoter, which in this case was 50% polyethylene glycol (MW, 1400), generally according to the now standard technique of Olsson and Kaplan described in Proc. Nat'l. Acad. Sci., USA, 77:5429 (1980), which is hereby incorporated by reference into this description. The early hybrids were grown in accordance with a customary procedure in microcultures in hypoxanthine-aminopterin-thymidine medium, which kills all HGPRT- parental myelomas. After 14 days of culture, the supernatants of the microcultures were screened by enzyme immunoassay for the presence of antibodies that bind to PRP capsular polysaccharide of the bacterium Haemophilus influenzae type b. A positive culture was cloned by limiting dilution on a feeder cell, which in this case was irradiated mouse tumor macrophages (P388D1). After 19 days, the microcultures were retested by enzyme immunoassay to identify clones that secreted monoclonal anti-PRP antibody. One clone designated C3, H12 by us was selected and grown in large-scale culture. By Ouchterlony analysis, the antibodies of this clone were determined to be of the IgG isotype, and by using Protein A Sepharose affinity chromatography, purified IgG anti-PRP antibody was obtained. The subclass of this antibody appears to be IgG1. As indicated earlier, now that we have described the procedures for obtaining this carrier cell, we believe that a person skilled in this art will be able to reproduce our work and obtain a self-reproducing carrier cell containing genes that produce human monoclonal antibody reactive with antigenic polyribosylribitol phosphate capsular polysaccharide.

CLAIMS:

1. A human monoclonal antibody reactive with antigenic polyribosylribitol phosphate capsular polysaccharide, said antibody produced by a self-reproducing carrier cell containing genes that produce a human monoclonal antibody reactive with polyribosylribitol phosphate capsular polysaccharide.



☐ 3. Document ID: JP 59089697 A

L2: Entry 3 of 3

File: JPAB

May 23, 1984

PUB-NO: JP359089697A

DOCUMENT-IDENTIFIER: JP 59089697 A

TITLE: POLYRIBOSYLRIBITOL PHOSPHATE AND REACTIVE HUMAN MONOCLONAL ANTIBODY

PUBN-DATE: May 23, 1984

INVENTOR-INFORMATION:

NAME

COUNTRY

JIERAADO DABURIYU FUITSUSHIYAA KENESU DABURIYU HANTAA JIYUNIA

US-CL-CURRENT: 435/70.21; 435/332, 435/FOR.111

Generate Collection Print Fwd Refs Bkwd Refs	Generate
Term	Documents
HYBRIDOMA	47604
HYBRIDOMAS	29775
HYBRI-DOMA	4
HYBRI-DOMAS	C
MAB	.25876
MABS	13950
MOAB	1134
MOABS	417
MONOCLONAL	123933
MONOCLONALS	2898
MONO-CLONAL	356
(L1 NEAR5 (HYBRIDOMA OR HYBRI-DOMA OR MAB OR MOAB OR MONOCLONAL OR MONO-CLONAL OR	3
ASCITES)).PGPB,USPT,USOC,EPAB,JPAB,DWPI.	

Display Format: - Change Format

Record List Display Page 2 of 4

7. A method according to claim 5, wherein said composition comprises a monoclonal antibodies.

8. A method according to claim 6, wherein said composition comprises a monoclonal antibodies.

Full Title Citation Front Review Classification Date Reference Sequences Attachments Claims RMC Draw Dec.

☐ 2. Document ID: US 20050158346 A1

L12: Entry 2 of 4

File: PGPB

Jul 21, 2005

Apr 17, 2001

DOCUMENT-IDENTIFIER: US 20050158346 A1

TITLE: Antimultiorganism Glycoconjugate vaccine

CLAIMS:

- 4. The glycoconjugate preparation of claim 1, which comprises a 1,5-poly(<u>ribitol</u> phosphate) and a 1,3-poly(glycerol phosphate).
- 5. The glycoconjugate preparation of claim 1, which comprises (a) an unsubstituted 1,5-poly(<u>ribitol</u> phosphate); (b) a 1,3-poly(glycerol phosphate); and (c) a poly(<u>2-acetamido-2-deoxy-.beta.-glucosyl-1.fwdarw.4--ribitol</u> phosphate) with the phosphodiester bonds located between C-1 of <u>ribitol</u> and C-3 of 2-acetamido-2-deoxy-.beta.-glucose.
- 6. A glycoconjugate preparation consisting essentially of (a) an unsubstituted 1,5-poly(<u>ribitol</u> phosphate) bound to a protein or peptide, or (b) an unsubstituted 1,3-poly(glycerol phosphate) bound to a protein or peptide.
- 7. A glycoconjugate preparation comprising (a) an unsubstituted 1,5-poly(<u>ribitol</u> phosphate); (b) a 1,3-poly(glycerol phosphate); and (c) a poly(<u>2-acetamido-2-deoxy-beta.-glucosyl-1.fwdarw.4-ribitol</u> phosphate) with the phosphodiester bonds located between C-1 of <u>ribitol</u> and C-3 of 2-acetamido-2-deoxy-beta.-glucose, wherein one or more of the polysaccharides is bound to a protein or a peptide.
- 21. The antibody of claim 16, which is a collection of one or more monoclonal antibodies.

Full Title Citation Front Review Classification Date Reference Sequences Attachments Claims Diff. Craw. D.

3. Document ID: US 6218166 B1

File: USPT

DOCUMENT-IDENTIFIER: US 6218166 B1

L12: Entry 3 of 4

Record List Display Page 3 of 4

** See image for Certificate of Correction **

TITLE: Adjuvant incorporation into antigen carrying cells: compositions and methods

CLAIMS:

21. The composition of claim 20, wherein said adjuvant is lipoteichoic acid (LTA), ribitol technic acid (RTA), glycerol teichoic acid (GTA), hemocyanin from keyhole limpet (KLH), chitin, chitosan, muramyl dipeptide (MDP), threonyl-MDP, a fatty acid derivative of muramyl dipeptide (MTPPE), bacillus Calmette-Guerin (BCG), cell wall skeleton (CWS), trehalose dimycolate, QS21, Quil A or lentinen.

39. The method of claim 37, wherein a spleen cell sample is obtained from said animal to provide a monoclonal antibody.

Full	Title	Citation Fro	ont Review	Classification	Date	Reference	Clain	E 10010	Drawe Do
F	4	Document 1	ID. LIC CO	55070 A					

File: USPT

Sep 21, 1999

DOCUMENT-IDENTIFIER: US 5955079 A

L12: Entry 4 of 4

TITLE: Dual carrier immunogenic construct

CLAIMS:

- 27. The dual carrier immunogenic composition of claim 4, wherein at least one primary carrier is H. influenzae type b polyribosyl-ribitol-phosphate.
- 29. The dual carrier immunogenic composition of claim 15, wherein at least one primary carrier is H. influenzae type b polyribosyl-ribitol-phosphate.
- 43. The immunotherapeutic composition of claim 42, wherein the B cells are used to produce monoclonal antibodies.
- 47. The immunotherapeutic composition of claim 46, wherein the B cells are used to produce monoclonal antibodies.
- 51. The immunotherapeutic composition of claim 50, wherein the B cells are used to produce $\underline{monoclonal}$ antibodies.
- 61. The immunotherapeutic composition of claim 58, wherein the B cells are used to produce $\underline{monoclonal}$ antibodies.
- 62. The immunotherapeutic composition of claim 59, wherein the B cells are used to produce monoclonal antibodies.
- 63. The immunotherapeutic composition of claim 60, wherein the B cells are used to produce monoclonal antibodies.

Full	Title Citation Front Review Classification Date Reference	Claims KNNC Crave
Clear	Generate Collection, Rrint Fwd Refs B	Skwd Refs Generate OACS
	Term	Documents
	(10 NOT 9 NOT 2).PGPB,USPT,USOC,EPAB,JPAB,DWPI.	4
	(L10 NOT L9 NOT L2).PGPB,USPT,USOC,EPAB,JPAB,DWPI.	4

Display Format:	-	Change Format
Display Format:		Change Format

Previous Page Next Page Go to Doc#

Zentralbl Bakteriol Mikrobiol Hyg [A]. 1988 Jan;267(3):414-24. Links

Study of Staphylococcus aureus teichoic acid immunodominant site by help of synthetic haptens.

Pérouse de Montclos M, Boullanger P, Flandrois JP.

Laboratoire de Bactériologie, Université Claude Bernard Lyon I, Faculté de Médecine Lyon-Sud.

The beta ribitol teichoic acid was extracted and purified from Staphylococcus aureus strain Wood 46 and chemically and immunologically characterised. Rabbit antiserum was prepared against formalin killed Staphylococcus aureus cells. Liquid phase immunoprecipitation of the beta ribitol teichoic acid-anti-Staphylococcus aureus serum system was studied by laser nephelometry. Various mono- and disaccharides (N-acetyl-glucosamine-ribitol with alpha- or beta-linkage and N-acetyl-glucosamine-ribitol-phosphate with beta-linkage) were prepared by organic synthesis, reproducing part of the ribitol teichoic acid molecule. Inhibition by those mono- or disaccharides of the precipitation of the beta-ribitol teichoic acid-Staphylococcus aureus antibodies system was studied quantitatively by determining inhibitory ratio of each inhibitor. Glucose, ribitol and glucosamine were weak inhibitors whereas N-acetyl-glucosamine was a better one, stronger than disaccharide with an alpha-linkage. The beta linked disaccharide and beta-methyl-N-acetylglucosamine gave comparable inhibition and both compounds were effective inhibitors. The most potent inhibitor was phosphorylated beta-linked disaccharide which inhibited 25% more than the same disaccharide without phosphorus. Thus, the function of phosphorus in Staphylococcus aureus beta ribitol teichoic acid recognition by antibodies was demonstrated.

PMID: 3131981 [PubMed - indexed for MEDLINE]

Zentralbl Bakteriol Mikrobiol Hyg [A]. 1988 Jan;267(3):414-24. Links

Study of Staphylococcus aureus teichoic acid immunodominant site by help of synthetic haptens.

Pérouse de Montclos M, Boullanger P, Flandrois JP.

Laboratoire de Bactériologie, Université Claude Bernard Lyon I, Faculté de Médecine Lyon-Sud.

The beta ribitol teichoic acid was extracted and purified from Staphylococcus aureus strain Wood 46 and chemically and immunologically characterised. Rabbit antiserum was prepared against formalin killed Staphylococcus aureus cells. Liquid phase immunoprecipitation of the beta ribitol teichoic acid-anti-Staphylococcus aureus serum system was studied by laser nephelometry. Various mono- and disaccharides (N-acetyl-glucosamine-ribitol with alpha- or beta-linkage and N-acetyl-glucosamine-ribitol-phosphate with beta-linkage) were prepared by organic synthesis, reproducing part of the ribitol teichoic acid molecule. Inhibition by those mono- or disaccharides of the precipitation of the beta-ribitol teichoic acid-Staphylococcus aureus antibodies system was studied quantitatively by determining inhibitory ratio of each inhibitor. Glucose, ribitol and glucosamine were weak inhibitors whereas N-acetyl-glucosamine was a better one, stronger than disaccharide with an alpha-linkage. The beta linked disaccharide and beta-methyl-N-acetylglucosamine gave comparable inhibition and both compounds were effective inhibitors. The most potent inhibitor was phosphorylated beta-linked disaccharide which inhibited 25% more than the same disaccharide without phosphorus. Thus, the function of phosphorus in Staphylococcus aureus beta ribitol teichoic acid recognition by antibodies was demonstrated.

PMID: 3131981 [PubMed - indexed for MEDLINE]



Structure of the linkage units between ribitol teichoic acids and peptidoglycan.

Kojima N, Araki Y, Ito E.

The structure of the linkage regions between ribitol teichoic acids and peptidoglycan in the cell walls of Staphylococcus aureus H and 209P and Bacillus subtilis W23 and AHU 1390 was studied. Teichoic acid-linked saccharide preparations obtained from the cell walls by heating at pH 2.5 contained mannosamine and glycerol in small amounts. On mild alkali treatment, each teichoic acid-linked saccharide preparation was split into a disaccharide identified as Nacetylmannosaminyl beta(1----4)N-acetylglucosamine and the ribitol teichoic acid moiety that contained glycerol residues. The Smith degradation of reduced samples of the teichoic acid-linked saccharide preparations from S. aureus and B. subtilis gave fragments characterized as 1,2ethylenediol phosphate-(glycerolphosphate)3-N-acetylmannosaminyl beta(1----4)Nacetylxylosaminitol and 1,2-ethylenediolphosphate-(glycerol phosphate)2-N-acetylmannosaminyl beta(1----4)N-acetylxylosaminitol, respectively. The binding of the disaccharide unit to peptidoglycan was confirmed by the analysis of linkage-unit-bound glycopeptides obtained from NaIO4 oxidation of teichoic acid-glycopeptide complexes. Mild alkali treatment of the linkageunit-bound glycopeptides yielded disaccharide-linked glycopeptides, which gave the disaccharide and phosphorylated glycopeptides on mild acid treatment. Thus, it is concluded that the ribitol teichoic acid chains in the cell walls of the strains of S. aureus and B. subtilis are linked to peptidoglycan through linkage units, (glycerol phosphate)3-N-acetylmannosaminyl beta(1----4)Nacetylglucosamine and (glycerol phosphate)2-N-acetylmannosaminyl beta(1----4)Nacetylglucosamine, respectively.

PMID: 3918002 [PubMed - indexed for MEDLINE]

J Bacteriol 1985 Jan; 161(1):299-306. Full Text | FREE | in PubMed Central | Links

Structure of the linkage units between ribitol teichoic acids and peptidoglycan.

Kojima N, Araki Y, Ito E.

The structure of the linkage regions between ribitol teichoic acids and peptidoglycan in the cell walls of Staphylococcus aureus H and 209P and Bacillus subtilis W23 and AHU 1390 was studied. Teichoic acid-linked saccharide preparations obtained from the cell walls by heating at pH 2.5 contained mannosamine and glycerol in small amounts. On mild alkali treatment, each teichoic acid-linked saccharide preparation was split into a disaccharide identified as Nacetylmannosaminyl beta(1----4)N-acetylglucosamine and the ribitol teichoic acid moiety that contained glycerol residues. The Smith degradation of reduced samples of the teichoic acid-linked saccharide preparations from S. aureus and B. subtilis gave fragments characterized as 1,2ethylenediol phosphate-(glycerolphosphate)3-N-acetylmannosaminyl beta(1----4)Nacetylxylosaminitol and 1,2-ethylenediolphosphate-(glycerol phosphate)2-N-acetylmannosaminyl beta(1----4)N-acetylxylosaminitol, respectively. The binding of the disaccharide unit to peptidoglycan was confirmed by the analysis of linkage-unit-bound glycopeptides obtained from NaIO4 oxidation of teichoic acid-glycopeptide complexes. Mild alkali treatment of the linkageunit-bound glycopeptides yielded disaccharide-linked glycopeptides, which gave the disaccharide and phosphorylated glycopeptides on mild acid treatment. Thus, it is concluded that the ribitol teichoic acid chains in the cell walls of the strains of S. aureus and B. subtilis are linked to peptidoglycan through linkage units, (glycerol phosphate)3-N-acetylmannosaminyl beta(1----4)Nacetylglucosamine and (glycerol phosphate)2-N-acetylmannosaminyl beta(1----4)Nacetylglucosamine, respectively.

PMID: 3918002 [PubMed - indexed for MEDLINE]